REMARKS/ARGUMENTS

The Examiner is thanked for the Office Action mailed May 7, 2007. The status of the application is as follows:

- Claims 1-20 are pending. Claim 6 has been amended herein.
- The specification is objected to for informalities.
- Claims 6-20 are rejected under 35 U.S.C. 101 as being directed towards non-statutory subject matter.
- Claims 1-6, 10, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trotel (US 5,022,060) in view of Yu (US 6,094,473).

The objections and rejections are discussed below.

The Specification

The Specification stands objected to for informalities. The Office suggests replacing the phrase "the oscillator 74 and the time counter 78 may combined a time circuit" on page 8, lines 2-3, with the phrase "the oscillator 74 and the time counter 78 may be combined as a time circuit". This rejection should be withdrawn because the specification has been amended herein with a replacement paragraph amended in accordance with the Office's suggestion.

The Rejection Under 35 U.S.C. 101

Claims 6-20 stand rejected under 35 U.S.C. 101 as being directed towards non-statutory subject matter. The Office is thanked for indicating that the claims would be statutory if amended to include the step of storing the determined radiation intensity so that the data is available for a practical application. Independent claim 6 has been

accordingly amended herein. Claims 7-20 directly or indirectly depend from claim 6. In light of the amendment to claim 6, the rejection of claims 6-20 should be withdrawn.

The Rejection of Claims 1-6, 10, and 16 under 35 U.S.C. 103(a)

Claims 1-6, 10, and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Trotel in view of Yu. This rejection should be withdrawn because the combination of Trotel and Yu does not teach or suggest all the limitations of the subject claims and, therefore, does not establish a *prima facie* case of obvious with respect to claims 1-6, 10, and 16.

> To establish a *prima facie* case of obviousness, ... the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2143.

Claim 1 is directed towards a CT scanner that includes, *inter alia*, means for generating an analog data signal that varies with an intensity of radiation traversing the examination region, means for converting the analog data signal to a digital data signal including aperiodic pulses varying in frequency with the intensity of the radiation traversing the examination region as the radiation source rotates about the examination region, ***a means for producing a time signal indicative of data intervals, and means for determining average radiation intensity in each data interval by counting the pulses of the digital data signal starting with a digital data signal pulse occurring in a preceding data interval and continuing to a digital data signal pulse occurring in a succeeding data interval***. **Claim 6** is directed towards a method of performing the above acts.

The Office concedes that Trotel does not teach or suggest the aforementioned claimed aspects. In an attempt to make up for the conceded deficiencies, the Office asserts that Yu teaches these claimed aspects and that it would have been obvious to one of ordinary skill in the relevant art at the time of the invention to combine Trotel and Yu

to teach all the aspects of claim 1. However, Yu does not make up for the conceded deficiencies of Trotel.

In particular, the Office asserts that column 6, lines 1-8, of Yu teaches a means (namely, the voltage controlled oscillator 46) for producing a time signal indicative of data intervals as recited in claim 1. However, column 6, lines 1-8, of Yu does not teach this aspect. Rather, this section of Yu discloses a voltage-to-frequency converter (the voltage controlled oscillator 46) that converts an electrical voltage signal to a frequency signal. More particularly, Yu discloses a digital frequency modulated output signal circuit 40 that includes an x-ray sensor 30, a current-to-voltage converter 44, and the voltage controlled oscillator 46. (See column 5, lines 38-47). The current-to-voltage converter 44 converts an electric current output signal from the sensor 30 to an electric voltage output signal having a voltage level proportional to the current level in the current output signal. (See column 5, lines 52-57). The voltage controlled oscillator 46 receives the electric voltage output from the current-to-voltage converter 44 and generates a digital frequency modulated output signal based thereon. (See column 5, lines 57-63).

As disclosed at column 6, lines 1-8, the x-ray sensor 30 generates an electric current output signal in a range of 1-10 nano-Amperes and the voltage controlled oscillator 46 has an output range from 0 MHz to 8 MHz, and, thus, the voltage controlled oscillator 46 produces a digital frequency modulated output signal indicative of the level of the electrical current in the range of 0 MHz to 8 MHz. Hence, the referenced section of Yu teaches that the voltage controlled oscillator 46 is a ***voltage-to-frequency converter that converts an electrical voltage (which is indicative of a level of an electrical current), into a frequency signal***; the oscillator 46 produces a frequency (not time) signal indicative of a level of an electrical current (not data intervals). Yu is silent regarding a means producing a time signal indicative of data intervals as recited in claim 1.

The Office further asserts that column 6, lines 15-64, of Yu teaches a means (namely, elements 60, 70, and 72) for determining average radiation intensity in each data

interval by counting the pulses of the digital data signal starting with a digital data signal pulse occurring in a preceding data interval and continuing to a digital data signal pulse occurring in a succeeding data interval as recited in claim 1. However, column 6, lines 15-64, of Yu does not teach such aspects.

As disclosed in column 6, lines 15-64, of Yu, a pulse counting circuit 60 includes a digital counter 70 and a processor 72. The digital counter 70 counts pulses in the digital frequency modulated output signal produced by the voltage controlled oscillator 46. The digital counter 70 also loads an exposure length parameter value 74 into a counter register. The digital counter 70 counts pulses in the frequency modulated output signal as a pulse count value and generates a count match signal 76 when the pulse count value corresponds to the exposure length parameter value 74. As disclosed in the Abstract, the pulse count value is compared against the exposure length parameter value 74 and the count match signal 76 is based on a correspondence therebetween. The processor 72 generates an exposure termination signal 80 in response to receiving the count match signal 76, and the exposure termination signal 80 is used by the generator 21 of the X-ray imaging apparatus 1 to interrupt the generation of the X-ray beam 14.

Hence, column 6, lines 15-64, of Yu, teaches ***terminating x-ray generation when a count of the pulses in the frequency modulated output signal matches a stored preset exposure length parameter value***. This section of Yu does not teach or suggest a means for determining average radiation intensity, let alone an average radiation intensity in each data interval by counting the pulses of the digital data signal starting with a digital data signal pulse occurring in a preceding data interval and continuing to a digital data signal pulse occurring in a succeeding data interval as recited in claim 1.

In view of the above, it is readily apparent that the combination of Trotel and Yu does not teach or suggest all of the aspects of claims 1 and 6. Therefore, the rejection of claims 1 and 6 should be withdrawn.

Claims 2-5 and claims 10 and 16 respectively depend from claims 1 and 6 and are allowable at least by virtue of their dependencies.

Conclusion

In view of the foregoing, it is submitted that the claims distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,

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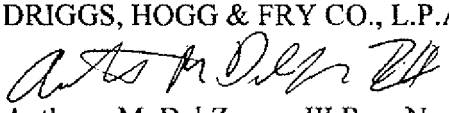

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